CIIArTEll VIII

INFLUENCE OF INCOMl'U'iTKNKHH OF THH UK

IT is theoretically impossible to obtain formation of pirn* CO or C02 from the influence of 0 or water-vapour on an excess of carbon, since it always results in tho production of both gases. By the observance of the correct and most favourable reaction conditions, one in enabled, lunvovor, to reduce the €62 content to a certain minimum, and thus, for example, Naumann and Ernst (vitk ,'F. Finchor, p. 201) obtain*'*} by passing COs over coke heated in a porcelain tubo to 1,000 a gas mixture which contained '21 par cent. C0a and i>7"l> prr cent. CO,

Harries (vide p. 86) obtained by the pannage of wt^am ov««r incandescent coke at a temperature of 1,125" 0.

1-24 per cent. COa+»H'7f> par cent (HK

One can thereupon assume that it IH poHHiblo to prod urn a gas in which in 100 parts of CO and (X)a thoro oxint 2 partn C02 and 98 parts CO, and can further mako UHH tif thonn figures as a means of r-einodolling the calculated thifc»n*tJcal composition of the steam-air gas manufactured from <*«itd air, as they represent the limit which nhould bo Htrivon afit^r in practice, having in view that it ie actually ablti to hn achieved.

The composition of the theoretical steam-air gas wan 86-1 per cent. CO+4"7 per cent. II + C!)'C2 ptir cont. N,

of which 861 per cent. C-containing gas, wlioroof 2 pur et is able to be 00$ and 98 per cent. CO.

There must thus be 0-722 per cent. COa and 8G1 -0-722 cent, CO, or in round figures 0"8 cubic metre (JOa and * cubic metres CO, present in 100 cubic inotros of gan, In junction with 4'7 cubic metres II and x cubic motrcw N-

^s the gas is steam-air gas, the N content munt